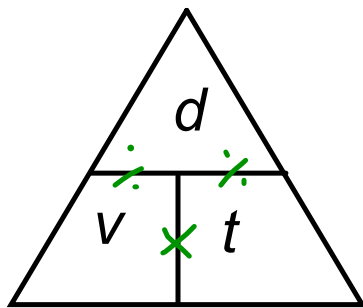


## Speed Formula



Speed - mph  $\frac{\text{km}}{\text{h}}$   $\frac{\text{m}}{\text{s}}$

distance (meters)

- km, m, cm

t - sec, hr  
time

$$\text{km} = \frac{\text{km}}{\text{h}} \text{ h}$$

$$d = vt$$

$$m = \frac{m}{s} s$$

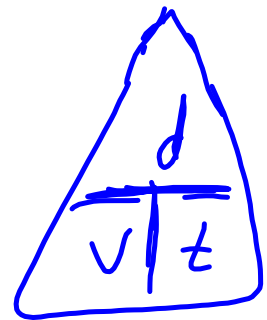
$$v = \frac{d}{t}$$

$$t = \frac{d}{v}$$

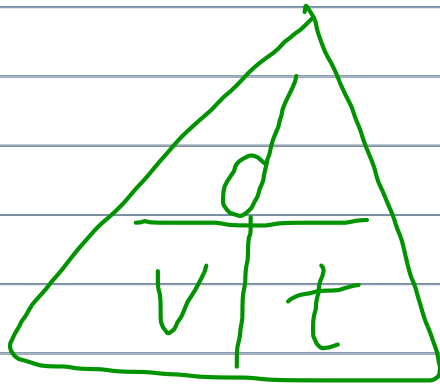
## Speed Formula

Steps for using a formula:

1. Make a list of the variables that you know.
2. Show the formula you are going to use.
3. Substitute the variables you know into the formula.
4. Work it out....show your answer.
5. Include units and adjust for sig. dig.



Example 1: A car travels 314.2 km in 3.25hrs.  
What is the speed?



$$d = \underline{314.2 \text{ km}}$$

$$v = ?$$

$$t = \underline{3.25 \text{ h}}$$

$$v = \frac{d}{t} = \frac{314.2 \text{ km}}{3.25 \text{ h}}$$

$$= 96.67 \frac{\text{km}}{\text{h}}$$

$$= \boxed{96.7 \text{ km/h}}$$

Example 2: Jack walks to school at 5.00 km/h  
It takes him 0.34 hours. How far away is the school?



$d = ?$

$$v = \underline{\underline{5.00 \text{ km/h}}}$$

$$t = \underline{\underline{0.34 \text{ h}}}$$

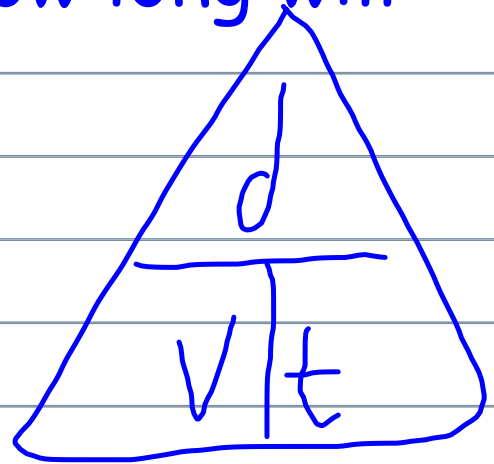
$$d = v \cdot t$$

$$d = 5.00 \text{ km/h} \cdot 0.34 \text{ h}$$

$$d = 1.7 \text{ km}$$

Example 3: Kira rides her bike to a beach 45 km away. Her average speed is 22km/hr. How long will this take?

$$d = 45 \text{ km}$$



$$V = 22 \frac{\text{km}}{\text{hr}}$$

$$t = ?$$

$$t = \frac{d}{V} = \frac{45 \text{ km}}{22 \frac{\text{km}}{\text{h}}} = 2.0 \text{ h}$$

Speed -Practice questions Name: \_\_\_\_\_

1. A football field is about 100.0 m long. If it takes a person 22 seconds to run its length, how fast were they running?
2. The pitcher's mound in baseball is 85m from the plate. It takes 4.4 s for a pitch to reach the plate. How fast is the pitch?
- 3.If you drive 115 km/hr for 6.0 hours, how far will you go?
4. If you run 12.0 m/s for 16.0 minutes, how far will you go?
- 5.Every summer I drive to Nashville. It is 3950 km to get there. If I average 105 km/hr, how much time will I spend driving?
6. A bullet travels 855 m/s. How long will it take a bullet to go 1.0 km?